Acer saccharum - Betula alleghaniensis - (Tilia americana) Forest

COMMON NAME	Sugar Maple - Yellow Birch - (American Basswood) Forest
SYNONYM	Maple - Yellow Birch Northern Hardwoods Forest
PHYSIOGNOMIC CLASS	Forest (I)
PHYSIOGNOMIC SUBCLASS	Deciduous forest (I.B)
PHYSIOGNOMIC GROUP	Cold-deciduous forest (I.B.2)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (I.B.2.N)
FORMATION	Lowland or submontane cold-deciduous forest (I.B.2.N.a)
ALLIANCE	ACER SACCHARUM - BETULA ALLEGHANIENSIS - (FAGUS GRANDIFOLIA) FOREST ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM TERRESTRIAL

RANGE

Isle Royale National Park

This community is restricted to the southwest end of the park.

Globally

This community occurs in northern Minnesota, northern Michigan, northern Wisconsin, and southern Ontario.

ENVIRONMENTAL DESCRIPTION

Isle Royale National Park

This community occupies gentle to somewhat steep slopes, mostly on glacial till, at elevations ranging from 680 to 1260 feet. Soils are sandy loams, and moderately well drained to well drained. Landscape positions are usually mid-slopes to high slopes of ridges.

Globally

This community is found on moderate to deep (60->150 cm) sandy loam, clay loam, or loamy sand soils (Coffman and Willis 1977, Pregitzer and Barnes 1984). The soils are typically slightly acidic to circumneutral, mesic to wet-mesic and nutrient rich (Kotar and Burger 1989). Most stands develop on flat to moderate slopes over glacial till.

MOST ABUNDANT SPECIES

Isle Royale National Park

Stratum	Species
Tree canopy	*Acer saccharum, Betula alleghaniensis*
Short shrub	*Acer saccharum* (seedlings)
Fern	*Lycopodium annotinum*

Globally

Stratum	Species
Tree canopy	*Acer saccharum, Betula alleghaniensis*

CHARACTERISTIC SPECIES

Isle Royale National Park

Acer saccharum, Betula alleghaniensis

Globally

Acer saccharum, Betula alleghaniensis

VEGETATION DESCRIPTION

Isle Royale National Park

This sugar maple - yellow birch - northern hardwoods forest is a closed canopy, deciduous forest. Canopy cover varies from 60 to 80%. Canopy dominants are *Acer saccharum* and *Betula alleghaniensis* (their combined cover is over 50%); other tree species present include *Thuja occidentalis*, *Pinus strobus* and *Picea glauca* (each with less than 50% cover). Subcanopy cover varies from 0 to 60% cover. Tall shrub cover is sparse to absent (0 to 10% cover). Cover of short shrubs usually varies from 10 to 40%. *Corylus cornuta* has less than 50% cover in the understory (typical is less than 30%). There is often a fairly high cover of seedlings of *Acer saccharum.* Herbaceous cover is sparse (0 to 5% cover); the most abundant herbs are *Lycopodium annotinum* and *Lycopodium dendroideum.*

Globally
This forest community is dominated by deciduous trees with scattered conifers in some stands. *Acer saccharum* is a dominant throughout the range of this community. It may form nearly pure stands (Flaccus and Ohmann 1964, Hansen *et al.* 1973). Other common canopy trees include *Acer rubrum*, *Betula alleghaniensis*, *Fraxinus americana*, and *Tilia americana*. Conifers such as *Abies balsamea*, *Picea glauca*, *Thuja occidentalis*, and *Tsuga canadensis* can be found in some stands. The shrub layer is sparse, however it can be moderately developed where the tree canopy is not fully closed. Typical shrubs include *Acer spicatum*, *Corylus cornuta*, *Lonicera canadensis*, and *Taxus canadensis*. The herbaceous stratum includes *Clintonia borealis*, *Lycopodium* spp., *Maianthemum canadense*, *Osmorhiza claytoni*, *Streptopus roseus*, and *Viola* spp. (Chambers *et al.* 1997).

OTHER NOTEWORTHY SPECIES
Isle Royale National Park
Information not available.

CONSERVATION RANK G3G4. There are probably over 100 occurrences rangewide. Ninety have been documented: 77 in Minnesota (where the community is ranked S2), 10 in Wisconsin (S4), and 3 in Michigan (S4). Although no other occurrences have been documented, the community is also reported from Ontario (S?). The 90 occurrences total 13,401 acres.

DATABASE CODE CEGL002457

MAP UNITS 09

COMMENTS
Globally
Boreal conifers, especially *Abies balsamea* and *Picea glauca*, increase in abundance and are common associates in northern Minnesota and on Isle Royale (Flaccus and Ohmann 1964, Hansen *et al.* 1973). *Tilia americana* is present along Minnesota's Lake Superior shore only about halfway to the Canadian border (Flaccus and Ohmann 1964).

REFERENCES
Coffman, M. S. and G. L. Willis. 1977. The use of indicator species to classifiy climax sugar maple and eastern hemlock forests in upper Michigan. Forest. Ecol. Manage. 1:149-168.

Flaccus, E. and L. F. Ohmann. 1964. Old-growth northern hardwood forests in northeastern Minnesota. Ecology 45:448-459.

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Kotar, J. and T. L. Burger. 1989. Forest habitat type classification for the Menominee Indian Reservation. Department of Forestry, University of Wisconsin, Madison. 90 p.

Pregitzer, K. S., and B. V. Barnes. 1984. Classification and comparison of upland hardwood and conifer ecosystems of the Cyrus H. McCormick Experimental Forest, upper Michigan. Can. J. For Res. 14:362-375.